and with the middle finger of the right hand the manubrium sterni is lightly percussed. The upper edge of the sternum (incisura semilunaris sterni) should be the part percussed, since it possesses a scanty covering of soft parts, even in adipose individuals. Naturally, the force of percussion stroke must be equal in comparing the two sides. To eliminate the sound from one apex, it is not necessary to exert very strong pressure with the hand. Indeed, it is sufficient to press the finger tips of the left hand into the first intercostal space. One of the advantages of this method of percussion is that the percussion note is uninfluenced by the relative muscular development of the two sides. Again, Plesch says, a lesion in any part of the apex alters the note, since the whole apex is percussed with one stroke. It is particularly in very early cases of tuberculosis that the method is of value; with bilateral apical disease it is less helpful. Plesch recommends this method as an adjuvant to the present methods of percussing the apices.

On Vertebral and Left-sided Paravertebral Liver Dulness.—P. GROCCO (*Wein. klin. Woch.*, 1911, xxiv, 667) describes an area for percussing the liver which is not mentioned in the text books on physical diagnosis and is apparently new. It is generally recognized that the upper border of liver dulness begins posteriorly at the tenth intercostal space and extends from the middle line around the thorax to the right, crossing the midsternal line and ending midway between the left parasternal and mammillary lines. Grocco finds that the upper border of absolute liver dulness also crosses the posterior middle line, and normally extends 3½ to 5 cm. to the left of it. In childhood it extends relatively farther to the left than in adults. In case the liver or its left lobe becomes enlarged, the upper border of absolute liver dulness may extend 7 to 10 or even 12 cm. to the left. Grocco has demonstrated the left-sided dulness posteriorly in over 300 examinations and also by Röntgen ray studies and postmortem findings. To demonstrate the dulness, one percusses from above downward along the right paravertebral line, then along the spinous processes, and finally to the left of the vertebræ, marking the points at which pulmonary resonance ceases and liver dulness begins. Then, beginning well outside the left scapular line, one percusses toward the vertebræ, working along the line of dulness, to determine the extent of hepatic dulness to the left. This is measured. There are many useful applications of this procedure. By means of it Grocco diagnosticated a small abscess of the left lobe which gave no other physical signs. In determining whether dulness at the right base is pulmonary or hepatic in origin, a comparison of the level of dulness on either side of the vertebræ is usually conclusive.

Experimental Measles in the Monkey.—J. F. ANDERSON and J. GOLDBERGER (*Public Health Report, U. S. Mar. Hosp. Serv.*, Washington, 1911, xxvi, 887) have added a supplemental note to their recent report on experimental measles in the monkey (*Ibid.*, 1911, xxvi, 847). They have inoculated defibrinated human blood, obtained within thirty-two hours after the eruption of measles, into rhesus monkeys. The inoculations were intraperitoneal, subcutaneous, intracerebral, or intravenous. In certain of the animals they obtained welldefined febrile reactions accompanied at times by macular or maculopapular skin eruptions of short duration (two to three days). From animals exhibiting febrile reaction they have withdrawn blood and inoculated other monkeys and have adduced evidence of transmission of the virus through three generations. The susceptibility of the rhesus monkey appears not to be very great and is subject to considerable individual variation. The time interval between inoculations and febrile reactions was five to seven days. The bloods used for inoculation gave no visible growth in standard glucose broth in fermentation tubes.

The Third Heart Sound and the "B" Wave in Slow Heart Action.—J. D. Windle (*Quart. Jour. Med.*, Oxford, 1911, iv, 284), in a study of the third heart sound and the *B* or *L* wave arrives at the following conclusions: (1) A third heart sound with an associated *B* wave was present in 2 out of 193 observations on normal individuals. The pulse rate was abnormally slow and sinus irregularity present in both cases. (2) In 13 instances of the number of persons examined, a decided *B* wave was present in the venous tracing, in none of which was a third sound heard. Marked sinus irregularity was present in 9 of the records. The pulse rate in these cases varied from 50 to 60 per minute. (3) When the pulse rate was quickened in cases in which the *B* wave was persistently present under normal conditions, it did not show in the tracing when the pulse rate exceeded 80 per minute. When associated with sinus arrhythmia it was absent from the venous curve when the arrhythmic beats approached this rate. (4) The *B* wave may first appear in the venous tracing coincidently with regular slowing of the heart to a rate of from 50 to 70 per minute under digitalis. This may be brought about in the normal heart. In no case observed was there a third sound present. In slowing resulting from partial heartblock due to squill, an extra wave succeeding blocked auricular waves is shown to occur coincidentally with the establishment of heartblock; in this case a clearly marked third sound was present. (5) Venous curves showing the *B* wave may present a close resemblance at times to those resulting from extrasystoles or cases of heart block. (6) With a certain rate of pulse the *B* and *A* waves may fall together and give an appearance to the curve closely simulating an increased *a-c* interval.

The Bacteriology of the Sputum from the Lower Respiratory Tract.—Hastings and Niles, (*Jour. Exper. Med.*, 1911, xiii, 638) have investigated the bacteriology of the sputum from the respiratory tract taken below the epiglottis, using all precautions to avoid mouth contamination. They studied 183 cases, making 341 cultures in all, over a period of seven years. They found a marked change in the incidence of various bacteria from year to year, but in the sum total, the micrococcus catarrhalis was the organism in 21 per cent., the aureus and streptococcus coming second and third before the pneumococcus. There were numerous cases of lobar pneumonia, especially with atypical signs, where the pneumococcus was not found at all, and they feel sure that pneumonia may be caused by other bacteria. Only 38 per cent. of the infections of the respiratory tract below the glottis are pure. While in a large precentage of cases the micrococcus catarrhalis is a secondary invader, it may assume pathogenic properties.

SURGERY

UNDER THE CHARGE OF

J. WILLIAM WHITE, M.D.,

FORMERLY JOHN RHEA BARTON PROFESSOR OF SURGERY IN THE UNIVERSITY OF PENNSYLVANIA, AND SURGEON TO THE UNIVERSITY HOSPITAL,

AND

T. TURNER THOMAS, M.D.,

ASSOCIATE IN SURGERY IN THE UNIVERSITY OF PENNSYLVANIA; SURGEON TO THE PHILADELPHIA GENERAL HOSPITAL, AND ASSISTANT SURGEON TO THE UNIVERSITY HOSPITAL.

Concerning the Experimental Production of Gastric Ulcers through Nerve Lesions.—KAWAMURA (*Deut. Zschr. f. Chir.*, 1911, cix, 540) says that the pathogenesis of stomach ulcers is still in the dark, notwithstanding the numeruos investigations which have been made. Kawamura has studied the subject from the side of the nervous influence, and has experimented on dogs and rabbits. That stomach ulcers can arise from disturbances of the nervous system has been shown experimentally by many workers. In dogs after section of the vagus, extirpation of the celiac plexus including the celiac ganglia, etc., the findings in the stomach were always negative, while in rabbits various changes were found, such as hemorrhages, erosions, ulcerations, and scars. In one rabbit's stomach, which was extirpated a few hours after operation, there was observed a typical round ulcer at the junction of the pylorus and duodenum. There were found many times, besides ulcers at the pylorus, hemorrhages or hemorrhagic erosions in other places. Further, there were observed streaky or star-shaped scars in the mucous membrane of animals which died some days after the operation. In one dog killed seven days afterward there was observed a bean-sized typical ulcer in the pyloric region of the stomach. Also in animals in which the intestines were merely moved about, or in which colleagues had performed a nephrectomy, or decapsulation of the kidney, similar anatomical lesions were found in the stomach. Hemorrhages and hemorrhagic erosions were found even in animals which were apparently sound. Ulcerations of the stomachs of rabbits may be produced, therefore, from vagotomy or from extirpation of the celiac plexus, including the celiac ganglia. In further investigations along these lines, dogs should be chosen because the results in rabbits are ambiguous. In the urine of the animals experimented on no abnormal elements were observed which could stand in a causal relation to the extirpation of the celiac plexus and celiac ganglia. After vagotomy the hydrochloric acid was always diminished. After removal of the celiac plexis it was sometimes increased, sometimes diminished.

Pantopton-scopolamin Injection Narcosis.—KRAUSS (*Zentralbl. f. Chir.*, 1911, xxxviii, 697) reports the results of 57 injection narcoses, some with and some without the application of a tourniquet to the